

Governing Board Workshop – Item 6

December 14, 2011

SOUTH FLORIDA ENVIRONMENTAL REPORT

Background and Peer-Review Findings on the 2012 Draft Volume I

Garth Redfield, Ph.D., Chief Scientist
Water Quality Bureau

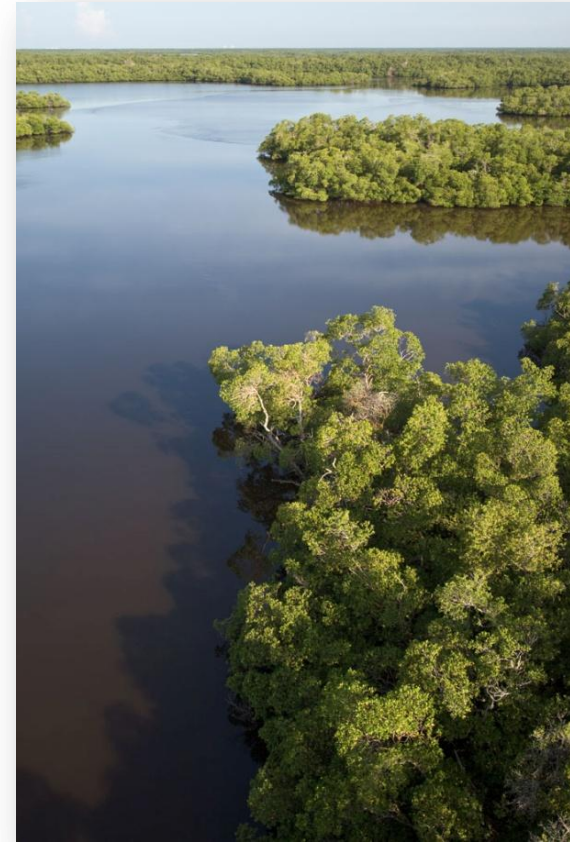
Report Overview

- Everglades Forever Act requires annual reporting on:
 - Everglades water quality
 - Source controls
 - Research
 - Stormwater Treatment Areas
- Summarizes annual monitoring, research data, and findings
- Consolidates 75+ individual reports in 3 volumes



Report Overview

- By March 1, 2012:
 - The 2,000 page Main Report, Executive Summary, and Project Database will be published on the Web www.sfwmd.gov/sfer
- Includes peer review of all Volume I chapters
 - Nutrient source controls, Stormwater Treatment Areas, exotic species, Everglades research, and other required topics



Peer-Review Process

Peer-Review Process

- Specified by the Everglades Forever Act
- Peer review is a documented evaluation of a product or program by qualified and independent experts
- Review panel focuses on key aspects, but is not restricted



Streamlined Review Process for 2012

- Draft Volume I peer review is documented on a web board, available for public comment
- Four (4) returning experts constitute the Volume I review panel
- Three (3) additional experts for special review of South Florida Water Depth Assessment Tool
- Final comments and recommendations on web
 - 120 pages of comments received, with agency responses for final report



Panel Questions

- **Technical review:** Is the report a defensible scientific account of data and findings supported by the 'best available information?'
- **Accountability review:** Is the report a logical tracking of data and findings that is complete and appropriate?
- Panel can comment substantively on any aspect of the report



2012 Volume I Peer-Review Panel

- Dr. Jo Ann Burkholder
North Carolina State University
- Dr. Peter Dillon
Trent University
- Dr. Vladimir Novotny
Northeastern University
- Dr. Otto Stein
Montana State University



Panel Findings and Recommendations

Panel Findings and Recommendations: Everglades Water Quality and Nutrient Controls

- More attention on influence of dry conditions on total phosphorus concentrations
- Further evaluation of low oxygen levels
- Sulfur and other variables tied to Everglades mercury problem need continuing data collection; modeling may be appropriate
- Improve Everglades Agricultural Area regression model TP target loads



Panel Findings and Recommendations: Everglades Stormwater Treatment Areas

- STA optimization:
Re-evaluate research program
- Consider newer process models
- Make more effective use of District data sets



Panel Findings and Recommendations: Everglades Ecology and Nonindigenous Species

- More synthesizing/publishing of Everglades data
- Continue to track macroalgae in Florida Bay
- Nonindigenous animals need additional multi-agency attention



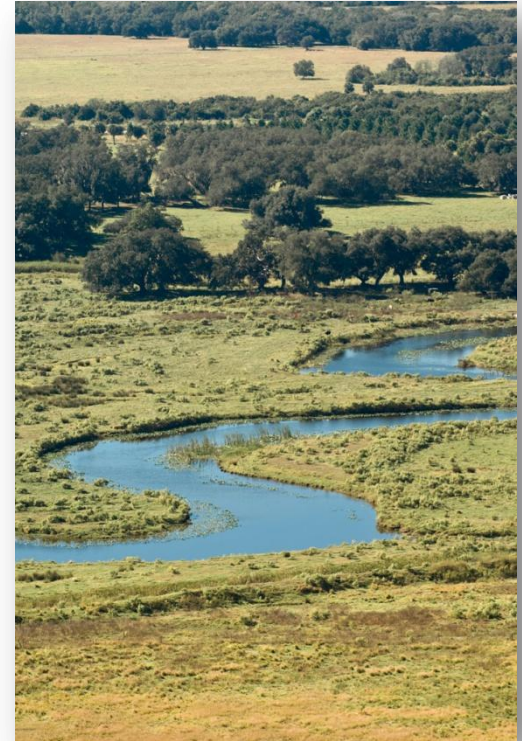
Panel Findings and Recommendations: Lake Okeechobee Protection Program

- Adjust the TP loading target beyond 2015 to reflect timing of watershed management
- Revisit internal TP loading, update loading models and include hydrological variations
- Consider an Index of Biotic Integrity for the Lake



Panel Findings and Recommendations: Kissimmee River Restoration and Basin Initiatives

- Factor variations in rainfall into hydrological targets
- Quantify project influences on TP loads to Lake Okeechobee



Panel Findings and Recommendations: Coastal Priorities

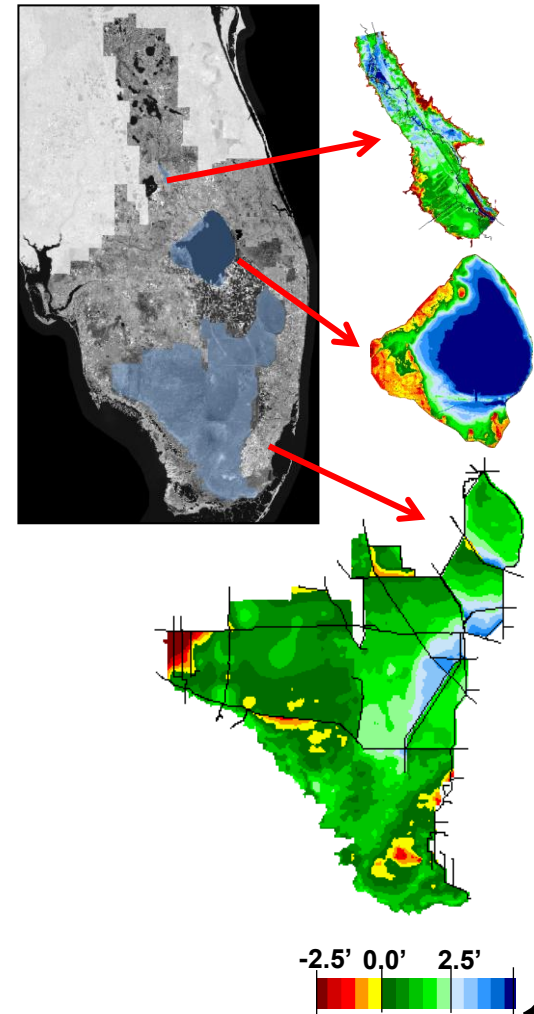
- Coastal ecosystems are valued 'end points' for water management
- Coastal resources merit more technical information
- Author responses did not satisfy the panel
- Address Panel input more thoroughly in future reports and restructure the chapter



Review of South Florida Water Depth Assessment Tools

2012 South Florida Water Depth Assessment Tools Peer-Review Panel

- Geo-statistics and Hydrology
 - Dr. George Christakos
San Diego State University
 - Dr. Yoram Rubin
University of California, Berkeley
 - Dr. Jery Stedinger
Cornell University



Panel Findings and Recommendations

- Tools are consistent with geo-statistical practices in hydrology and model validation is solid
- Improve ground elevation datasets
- Remove spatial trends and conduct other testing for better estimates of prediction uncertainty
- No fundamental problems identified; sound tools for decision support



Upcoming Governing Board Reviews

2012 South Florida Environmental Report – Volume II

- Five-Year Water Resource Development Work Program (Chapter 5A)
 - Mandated by State Law
(Section 373.536(6)(a)(4), F. S.)
 - Describes Water Resource Development component of regional Water Supply Plans for next five years
 - Reviewed by Florida Department of Environmental Protection
 - Will be approved separately by the Governing Board in December, 2012



2012 South Florida Environmental Report – Volume II

- Florida Forever Work Plan, 2011 Annual Update (Chapter 6A)
 - Mandated by State Law (Section 373.199, F.S.)
 - Proposed changes to Florida Forever eligibility list
 - Update of land acquisition activity
 - Separately adopted by Governing Board in January 2012



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Questions?

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